

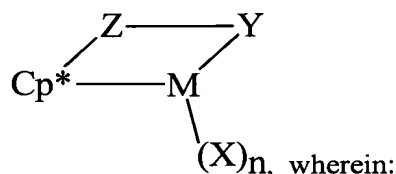
Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A catalyst composition for olefin polymerization comprising:

(A) a metal coordination complex of the formula:



(a) M is titanium;

(b) Cp* is selected from the group consisting of cyclopentadienyl and R"_m-substituted cyclopentadienyl, bound in an η⁵ bonding mode to M, wherein R" is independently selected from the group consisting of alkyl of up to 20 carbon atoms and aryl of up to 20 carbon atoms and two adjacent R" groups may join to form a ring and m is 1 to 4;

(c) Z is selected from the group consisting of CR'₂, CR'₂CR'₂, SiR'₂, and SiR'₂SiR'₂, wherein each R' is independently selected from the group consisting of alkyl of up to 20 carbon atoms, aryl of up to 20 carbon atoms, and mixtures thereof of up to 20 carbon atoms;

(d) Y is NR or PR, wherein R is selected from the group consisting of alkyl of up to 20 carbon atoms, aryl of up to 20 carbon atoms, and mixtures thereof of up to 20 carbon atoms;

(e) X is, independently each occurrence, selected from the group consisting of hydride, halide, alkyl of up to 30 carbon atoms, aryl of up to 30 carbon atoms, aryloxy of up to a total of 30 carbon and oxygen atoms, alkoxy of up to a total of 30 carbon and oxygen atoms, cyanide, azide, acetylacetonate, norbornyl, and benzyl; and

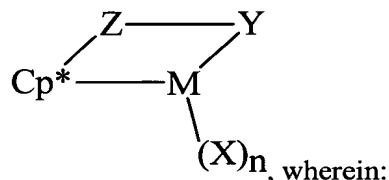
(f) n is 2; and

(B) an activating cocatalyst selected from the group consisting of ~~aluminum alkyls, aluminum halides, aluminum alkyl halides,~~ noninterfering oxidizing agents, mixtures thereof, ~~mixtures of alkylaluminoxanes, mixtures of Lewis acids, mixtures of ammonium salts, mixtures of alkylaluminoxanes and ammonium salts, mixtures of Lewis acids and~~

~~ammonium salts, and mixtures of aluminum alkyls, aluminum halides, aluminum alkylhalides or one or more noninterfering oxidizing agents with one or more aluminum alkyls, aluminum halides, aluminum alkylhalides, alkylaluminoxanes, Lewis acids, ammonium salts, or mixtures of alkylaluminoxanes, Lewis acids or ammonium salts.~~

2. (currently amended) A catalyst composition for olefin polymerization comprising:

(A) a metal coordination complex of the formula:



(a) M is titanium;

(b) Cp* is selected from the group consisting of indenyl, tetrahydindenyl, fluorenyl, octahydrofluorenyl, cyclopentadienyl, and R_m-substituted cyclopentadienyl, bound in an η⁵ bonding mode to M, wherein R is independently selected from the group consisting of alkyl of up to 20 carbon atoms and aryl of up to 20 carbon atoms;

(c) Z is selected from the group consisting of CR₂, CR₂CR₂, SiR₂, and SiR₂SiR₂, wherein each R' is independently selected from the group consisting of alkyl of up to 20 carbon atoms, aryl of up to 20 carbon atoms, and mixtures thereof of up to 20 carbon atoms;

(d) Y is NR or PR, wherein R is selected from the group consisting of alkyl of up to 20 carbon atoms, aryl of up to 20 carbon atoms, and mixtures thereof of up to 20 carbon atoms;

(e) X is, independently each occurrence, selected from the group consisting of hydride, halide, alkyl of up to 30 carbon atoms, aryl of up to 30 carbon atoms, aryloxy of up to a total of 30 carbon and oxygen atoms, alkoxy of up to a total of 30 carbon and oxygen atoms, cyanide, azide, acetylacetonate, norbornyl, and benzyl; and

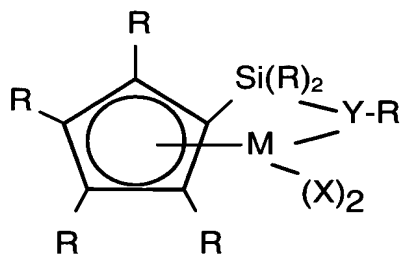
(f) n is 2; and

(B) an activating cocatalyst selected from the group consisting of ~~aluminum alkyls, aluminum halides, aluminum alkylhalides, noninterfering oxidizing agents, mixtures thereof, mixtures of alkylaluminoxanes, mixtures of Lewis acids, mixtures of ammonium salts, mixtures of alkylaluminoxanes and ammonium salts, mixtures of Lewis acids and ammonium salts, and mixtures of aluminum alkyls, aluminum halides, aluminum alkylhalides~~

~~or one or more noninterfering oxidizing agents with one or more aluminum alkyls, aluminum halides, or aluminum alkylhalides, alkylaluminoxanes, Lewis acids, ammonium salts, or mixtures of alkylaluminoxanes, Lewis acids or ammonium salts.~~

3. (currently amended) A catalyst composition for olefin polymerization comprising:

(A) a metal coordination complex of the formula:



, wherein:

M is titanium;

R each occurrence is independently selected from the group consisting of alkyl, and aryl of up to 10 carbons;

Y is nitrogen; and

X independently each occurrence is halo, alkyl, aryl, or alkoxy of up to 10 carbons; and

(B) an activating cocatalyst selected from the group consisting of ~~aluminum alkyls, aluminum halides, aluminum alkylhalides,~~ noninterfering oxidizing agents, mixtures thereof, ~~mixtures of alkylaluminoxanes, mixtures of Lewis acids, mixtures of ammonium salts, mixtures of alkylaluminoxanes and ammonium salts, mixtures of Lewis acids and ammonium salts,~~ and mixtures of aluminum alkyls, aluminum halides, aluminum alkylhalides ~~or one or more noninterfering oxidizing agents with one or more aluminum alkyls, aluminum halides, aluminum alkylhalides, alkylaluminoxanes, Lewis acids, ammonium salts, or mixtures of alkylaluminoxanes, Lewis acids or ammonium salts.~~

4. (currently amended) A catalyst composition according to any one of claims 1-3 wherein the activating cocatalyst ~~is~~ consists essentially of a noninterfering oxidizing agent.

5. (original) A process for preparing an olefin polymer comprising the step of polymerizing an olefin in the presence of a catalyst composition according to any one of claims 1-3.

6. (original) A process for preparing an olefin polymer comprising the step of polymerizing an olefin in the presence of a catalyst composition according to claim 4.